

Title (en)
AUTOMATED ULTRASONIC INSPECTION OF ELONGATED COMPOSITE MEMBERS USING SINGLE-PASS ROBOTIC SYSTEM

Title (de)
AUTOMATISIERTE ULTRASCHALLPRÜFUNG LANGGESTRECKTER VERBUNDELEMENTE MIT EINGÄNGIGEM ROBOTERSYSTEM

Title (fr)
INSPECTION ULTRASONIQUE AUTOMATISÉE D'ÉLÉMENTS COMPOSITES ALLONGÉS À L'AIDE D'UN SYSTÈME ROBOTIQUE À PASSAGE UNIQUE

Publication
EP 3136093 B1 20181003 (EN)

Application
EP 16184153 A 20160815

Priority
US 201514836154 A 20150826

Abstract (en)
[origin: EP3136093A2] Apparatus and methods for ultrasonic inspection of elongated composite members in a single scan pass using pulse echo phased arrays operating in a bubbler method. The system concept is fully automated by integrating an inspection probe assembly to a robot and using the robot to move the inspection probe assembly along the part (i.e., outside of an inspection tank); and by integrating tooling fixtures that move out of the way as the inspection probe assembly travels along the length of the part during the inspection. In addition, the system allows for generally elongated composite members having lengthwise variation in shape, curvature and dimensions.

IPC 8 full level
G01N 29/265 (2006.01); **B64F 5/60** (2017.01); **G01N 29/04** (2006.01); **G01N 29/22** (2006.01); **G10K 11/00** (2006.01)

CPC (source: EP US)
B64F 5/60 (2016.12 - EP US); **G01N 29/043** (2013.01 - EP US); **G01N 29/225** (2013.01 - EP US); **G01N 29/265** (2013.01 - EP US); **G01N 29/28** (2013.01 - EP US); **G10K 11/004** (2013.01 - EP US); **G01N 2291/0231** (2013.01 - EP US); **G01N 2291/106** (2013.01 - EP US); **G01N 2291/2638** (2013.01 - EP US); **G01N 2291/2694** (2013.01 - EP US)

Cited by
CN110632183A; CN112758350A; EP3786632A1; US11327052B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
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EP 16184153 A 20160815; US 201514836154 A 20150826; US 201815905106 A 20180226